Ex12	I I NTp16.2 n ² 1
CGGAGAGG	
CGAGAACAC	÷3 ¹
	ACGGCCGCGGCCCGGGGTCGGGTAGAGGAGGTGCGGGCGCTGCTG
	EX13
	NTp16.3
	GAGGCGGTGCCCCAACGCACCGAATAGTTACGGTCGGAG
	I(2) I(1) Ex14
	GCCGATCCAGGTCATGGATGATGGGCAGCGCCCCGAGTGGCGGAG
	Ex2 Exon 2
	CTGCTGCTGCTCCACGGCGGAGCCCAACTGCGCCGACCCCGCCA
•	p16INT
	CTCTCACCCGACCCGTGCACGACGCTGCCCGGGAGGGCTTCTGGAC
	NTp16.5
ran	ACGCTGGTGCTGCACCGGGCCGGGCGGGCTGGACGTGCGC
Ö	Ex3
rij	GATGCCTGGGGCCGTCTGCCCGTGGACCTGGCTGAGGAGCTGGGC
	CATCGCGATGTCGCACGGTACCTGCGCGCGCGCGCGGGGGCACC
	Ex15 I(3)
	AGAGGCAGTAACCATGCCCGCATAGATGCCGCGGAAGGTCCCTC
	I(2) Ex8 Ex4
	AGACATCCCCGATTGAAAGAACCAGAGAGGCTCTGAGAAACCTC
	Ex5
	GGGAAACTTAGATCATCAGTCACCGAAGGTCCTACAGGGCCACA
	${\tt ACTGCCCCGCCACAACCCACCCCGCTTTCGTAGTTTTCATTTAGA}$
	AAATAGAGCTTTTAAAAATGTCCTGCCTTTTAACGTAGATATAA
	GCCTTCCCCCACTACCGTAAATGTCCATTTATATCATTTTTTATAT
	GCCIICCCCACIACCGIAAAIGICCAIIIAIAICAIIIIIIAIAI

Fig. 1A

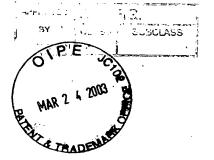


Fig. 1B



p16EX1	< GGNGGNAAGNTGTGGGGGAAAGTTTGGGGGATGGAANACCAANCCCTCCTTTCNTTACCAA	60
p16EX1	< ACNCTGGCTCTGNCGAGGCTNCNTCCGANTGGTNCCCCCGGGGGAGACCCAACCTGGGNC	120
p16EX1 p16EX13	<pre>< GACTTCAGGGNTGCNACATTCACTAAGTGCTNGGAGNTAATANCACCTCCTCCGAGCANx < TCNCTTATTGNTAGGANATAATAACACCCCCACCGAtAACT</pre>	180 41
p16EX1 p16EX13	TCGCTCACAGCGTCCCCTTACCTNGANAGATACCNCGxGxTCCCTCCAGAGGATTTGAGG TcaCTTACAACGTCCCNNTtCCTGgaAAGATACacaGCGTTCCCTCCAGAGGATTTGTGG	240 101
p16EX1 p16EX13	< GACAGGNTCGGAGGGGCTCTTCCCCCANCACCGGAGGAAGAAGAGAGGGGCTGACTG< GACAGGGTNGGAGNGGTCTCTTCCNCCACCACCGGAGGAAGAAGAGGGGGGCTGNCTG	300 161
	++++++	
p16EX1 p16EX13		360 221
p16EX1 p16EX13	< CAACGGGCGGGGAGCAGCATGGATCCGGCGGGGGGGGGG	420 281
P16NT2 p16EX1	GACNNNCTCCGGCCGGNGTCGGGTAGAGGAGGTGCGGGCGCTGCTGGAG GACTGACTGCCTCGC	49 435
p16EX13	< GACTGGCTGNCCACGNCCCGGGGTCGGGTAGAGGAGGTGCGGNCGCTNCTGGAG	341
P16NT3 P16NT2 p16EX13	> EX13 GTTNANCCCGGGTA < GCGGGGGCGCTGCCCAACGCACCGAATAGTTACGGTCGGAGGCCGATCCAGGTxxGGGTA < GCGGGGCCTCTGCCAACCCCTAAAAN	15 109 369
_		
P16NT3 P16NT2	> GAGGGTCTGCAGCGGGAGCAGNGGATGGCGGGCGACTCTGGAGGACGAAGTTTGCAGGGG < GAGGGTCTGCAGCGGGAGCAGGGGATGGCGGGCGACTCTGGAGGACGAAGTTTGCAGGGG	75 169
	++++++	
P16NT3 P16NT2	> AATTGGAATCAGGTAGCGCTTCGANTCTCCGGAAAAAGGGGAGGCTTCCTGGGGAGTTNN < AATTGGAATCAGGTAGCGCTTCGATTCTCCNGAAAAAGGGGAGGCTTCCTGGGGAGTTTT	135 229
	`	

Fig. 2A



:	${\tt CAGAAGGGGTTTGTAATCACAGNCCTCCNCCTGGCGACGCCCTGGGGGGTTGGGAAGCCACAGAAGGGGTTTGTAATCACAGACCTCCTCCTGGCGACGTCCTGGGGGGCTTGGGAAGCCACAGAAGGGGGTTTGTAATCACAGACCTCCTCCTGGCGACGTCCTGGGGGGCTTGGGAAGCCACAGAAGGGGGTTTGGGAAGCCACAGAAGGGGGTTTGGGAAGCCACAGAAGGGGGTTTGGGAAGCCACAGAAGGGGGTTTGGGAAGCCACAGAAGGGGGTTTGGGAAGCCACAGAAGGGGGTTTGGGAAGCCAAGAAGGGGGGTTTGGGAAGCCAAGAAGGGGGGTTTGGGAAGCCAAGAAGGGGGGTTTGGGAAGCCAAGAAGGGGGGTTTGGGAAGCCAAGAAGGGGGGTTGGGAAGCCAAGAAGGGGGGTTGGGAAGCCAAGAAGGGGGGTTGGGAAGCCAAGAAGGGGGGTTGGGAAGCCAAGAAGGGGGGGTTGGGAAGCCAAGAAGGGGGGTTGGGAAGCCAAGAAGGGGGGGTTGGGAAGCCAAGAAGGGGGGGTTGGGAAGCCAAGAAGGGGGGGG$	
	+	
	${\tt AGGAAGAGGAATGAGGAGNCACGCGCNTACAGNTCTCTCGAATNCTGANAAGATCTGAAGAGGAAGAGAGATCTNAAGATCTCTCGAATGCTGAGAAGATCTNAAGAGAGAGATCTNAAGATCTCTCGAATGCTGAGAAGATCTNAAGAGATCTNAAGATTNAAGATTTNAAGATTTNAAGATTTNAAGATTTNAAGATTTNAAGATTTNAAGATTTNAAGATTNAAGATTTTNAAGATTTNAAGATTTNAAGATTTTTNAAGATTTTNAAGATTTTNAAGATTTTTNAAGATTTTNAAGATTTTTTNAAGAT$	255 349
	+	
:	$\label{thm:ggggaacatatttgtattag} $$ $\operatorname{gggggaacatatttgtattag} \times \operatorname{gatattattag} \times \operatorname{gatattattag} \times \operatorname{gatattattag} \times \operatorname{gatattattag} \times \operatorname{gatattag} \times \mathsf{gatatt$	315 404
	+	
•	${\tt CGTGTGGNATAAAAAGGGAGTCTTAAAGAAATNTAAGATGTGCTGGGACTACTTAGCCTC}$	375
,	CAANACACAGATNCCTGGATGGAGCT	401

Fig. 2B



P16INT	>	AAAANNAAAAAAATCTCCCAGGCCTAACATAATTNTCAGGAAAGAAATTTCAGTAGTTG	60
		••••••	
P16INT	>	${\tt NATCTCAGGGGAAATACAGGAAGTTAGCCTGGAGTAAAAGTCAGTC$	120
P16INT	>	${\tt TGCTANATTGCCCGTGCCTCACAGTGCTCTCTGCCTGTGACGACAGCTCCNCAGAAGTTC}$	180
P16INT	>	GGAGGATATAATGGAATTCATTGTGTACTGAAGAATGGATAGAGAACTCAAGAAGGAAAT	240
P16INT	>	TGGAAACTGGAAGCAAATGTAGGGGTAATTAGACACCTGGGGCTTGTGTGGGGGTCTGCT	300
p16EX15	<	AANAAAAAAATNgAtAANATagAGGAaT	31
		+ Ex2A	
P16INT p16EX15	>	${\tt TGGCGGTGAGGGGGCTCTACACAAGCTTCCTTTCCGTCATGCCGNCCCCCACCCTGGCTC}\\ {\tt gAACANATTAAAAtcAAAAAAGANAACANAgAcaTaATAAAAAAAcGAgAATgTTcTAGAG}\\$	360 91
_		+	
P16INT	>	$\frac{I}{\texttt{TGACCATTCTGTTCTCTCTGGCAGGTCATGATGATGGGCAGCGCCCGAGTGGCGGAGCTG}}$	420
p16EX15	<	NTAATCATAATTATAAaggTcAAgACTCATTGATATnAAGGAaATtgAAGGGAAATctTa	151
		······	
P16INT		CTGCTGCTCCACGGCGCGAGCCCAACTGCTCCGACGCCG	460
p16EX2 p16EX14	>	CCTGCNACGACCCCGCCACTCTCACCCGACCCGTG	
p16EX15		NCTCTCACGGTGGGGAGGCCAACTGCGCCGAACCCGCCACTCTCACCCGACCCGCG acTagCACAANNGNATNAAAAAANAATTcCCACGACACCGCCACTCTCAACCGATCCGTG	56 211
••			٠
p16EX2	>	CACGACGCTGTCCGGGAGGGTTTCCTGGACACGCTGGTGGTGCTGCACCGGGCCGGGGNG	95
p16EX14	>	CACGACGGTGCCCGGGAGGGGTTCCTGGACACGCTGGTGCTGCTGCACCGGGCCGGGGCC	116
p16EX15	<	$\tt CTCGACACTGCCCGGGAGGTCNTCCTGGACACGCTGGTGGTNCTCCACCGGNCCGGGGCA$	271
		••••••	
p16EX2	>	$\tt CGGTTGGACGTGCCGATGCCTGGGGCCGCCTNCCCGTGGxACCTGGTTGAGGAGCTGGG$	155
p16EX14	>	CGGCTGGACGTTCGNGATGCCTGGGGGCCTTCTTTCCGTTNGxACCTGGCTGAAGAGCTGGN	176
p16EX15	<	CGTCTGGACGTGCGCGATGCCTGGGNCCGNCTACCCGTGGTACCTGACTGAGGACCTGGG	331
p16EX2	>	NCATCGCGATGTCGCACGGTACCTGCGCGCGGGTTGCGGGGGGCACCAGAGGXNAGTNACC	215
p16EX14 p16EX15	>	${\tt NCATCGNGATGTCGCACGGCCNCTGTGTGNGGGTGCGGGGGGCACCATAGGTCAGTNTCCCCCATCCCGATTTCGCNGGGTANCTGNGNGNGGCTGNGGGGGGCCAANAGAGGxCANTACCCC}$	236
	-	The state of the s	J J 1

Fig. 2C

SUBCLASS

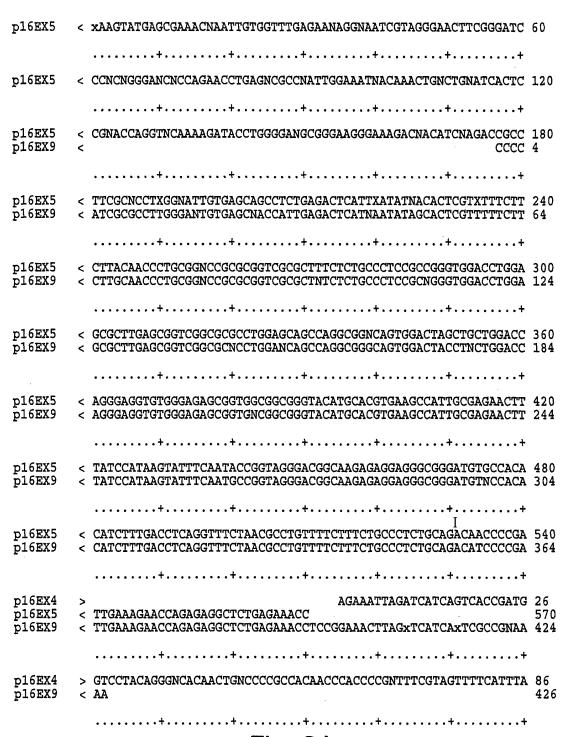


Fig. 3A



p16EX4	>	${\tt GAAAATAGAGCTTTTAAAAAATGTCCTGCCTTTTAACGTAGATATATGCCTTCCCCCACTA}$	146
		+	
p16EX4	>	${\tt CCGNAAATGTCCATTTATATCATNTTTTATATATTCTTATAAAAAATGTAAAAAAGAAAAA}$	206
		+	
p16EX4	>	${\tt CACCGCTTCTGCCTTTTCACTGTGTTGGAGTTTTCTGGAGTGAGCACTCACGCCCTAAGC}$	266
		+	
p16EX6 p16EX6a p16EX4	> >	CANCNATNTNCGGCATTTCTNGNGAGCCTCGTAGTCTCCGGATGNTGTCGACCTCGAG CANCNATNTNCGGCATTTCTNGNGAGCCTCGTAGTCTCCGGATGNTGTCGACCTCGAG GCACATTCATGTGGGCATTTCTTGCGAGCCTCGCAGNCTCCGGAAGCTGTCGACCTCGAG	58
p16EX6 p16EX6a p16EX4	>	GGGGGGNCCNGTACCCAATTCGNCCTATNGTGAGTCGTNTTACAATTCACTGGCCGCCGT GGGGGGNCCNGTACCCAATTCGNCCTATNGTGAGTCGTNTTACAATTCACTGGCCGCCGT GGGGGGNCCGGTACCCAATTCGCCCTATAGTGAGTCGTATTACAATTCACTGGNCGNCGN	118 118 386
		+	
p16EX6 p16EX6a p16EX4	>	$\label{totalcond} \textbf{TTT} \textbf{A} \textbf{C} \textbf{A} \textbf{C} \textbf{C} \textbf{C} \textbf{G} \textbf{G} \textbf{A} \textbf{A} \textbf{A} \textbf{C} \textbf{C} \textbf{C} \textbf{G} \textbf{G} \textbf{T} \textbf{T} \textbf{A} \textbf{C} \textbf{C} \textbf{C} \textbf{C} \textbf{T} \textbf{G} \textbf{A} \textbf{G} \textbf{C} \textbf{C} \textbf{C} \textbf{G} \textbf{G} \textbf{G} \textbf{G} \textbf{G} \textbf{A} \textbf{A} \textbf{A} \textbf{C} \textbf{C} \textbf{C} \textbf{G} \textbf{G} \textbf{G} \textbf{G} \textbf{G} \textbf{C} \textbf{T} \textbf{T} \textbf{A} \textbf{A} \textbf{C} \textbf{C} \textbf{C} \textbf{G} \textbf{G} \textbf{G} \textbf{G} \textbf{G} \textbf{G} \textbf{G} G$	
p16EX6 p16EX6a p16EX4	>	$\label{eq:local_colline} \textbf{NACATCCCCCTTTx} \textbf{CGCCAGCTGGTGTAATAGCGANGAGGCCCGCACCGATCGCCCTTCC} \\ \textbf{NACATCCCCCTTTx} \textbf{CGCCAGCTGGTGTAATAGCGANGAGGGCCCGCACCGATCGCCCTTCC} \\ \textbf{GACATCCCCCTTTTCGCCAGNTGGGGTTAATAGNGAAGAGGGCCNCACCNNTCGCCC} \\ \textbf{CGCCCCCCTTTTCGCCCAGNTGGGGTTAATAGNGAAGAGGGCCNCACCNNTCGCCC} \\ CGCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC$	238 238 502
		+	
p16EX6 p16EX6a		${\tt CAACAGTTGNGCAGCCTGAATGGCGAATGGAAATTGTAAGCGTTAATATTTTGTTAAAATCAACAGTTGNGCAGCCTGAATGGCGAATGGAAATTGTAAGCGTTAATATTTTGTTAAAATCAACAGTTGAACAGTTAATATTTTGTTAAAATCAACAGTTAATATTTTGTTAAAATCAACAGTTAACAGTAACAGTTAACAGTTAACAGTAAC$	298 298
		+	
p16EX6 p16EX6a		TCGCGTTANATCNTCGGTTAANTCAGCTCATNTTTTATCCAATAGGCCGANATCGGCANA TCGCGTTANATCNTCGGTTAANTCAGCTCATNTTTTATCCAATAGGCCGANATCGGCANA	
		++	
p16EX6 p16EX6a		ATCCCCAATAAATCAANAGAATAGACCGAGATAGGGTTGAGTGTCGTTCCAGTTNGGGAAATCCCCCAATAAATCAANAGAATAGACCGAGATAGGGTTGAGTGTCGTTCCAGTTNGGGAA	
p16EX6 p16EX6a		CANGAGTCCACTATTAAAGANCGTAGNCTCNAACGTCANAGGGCGAAAAACCNTNTTTCA CANGAGTCCACTATTAAAGANCGTAGNCTCNAACGTCANAGGGCGAAAAACCNTNTTTCA	



p16EX6 p16EX6a	GNGGATTGGNCCACTACGCNTANCC GNGGATTGGNCCACTACGCNTANCCATCACCCTATTC			503 515
		_	т.	

Fig. 3C



=	- 2 Z 7	· 	- 2 - 2
CELL	EXON 1 EXON 2	CEIL	EXON 1 EXON 2
NORMAL #2	NORM	HTB173	NORM
NORMAL #1	NORM	HTB172	NORM
A431	ALTERED ABSENT	Tera2	NORM
SaOs2	ALTERED ALTERED	GM130	NORM
HTB 125	ABSENT	ZRB75	NORM
MCF-7	ABSENT ABSENT	HTB100	NORM
CCL119	ABSENT	HeLa	NORM
018	ABSENT	CCL120	NORM
H3	ABSENT ABSENT	WI38	NORM

Fig. 4

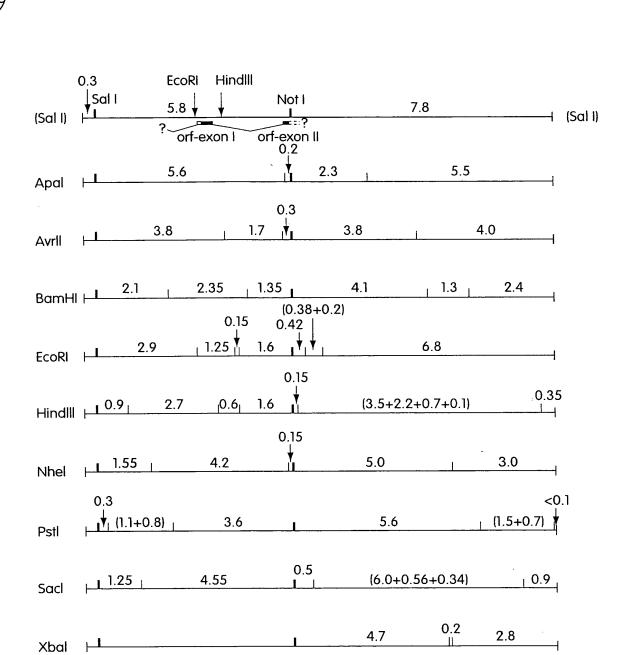


Fig. 5

Ser Ala Arg Val Ala Glu Leu Leu Leu Leu His Gly Ala Glu Pro Asn Cys Ala Asp Pro Ala Ser Ala Arg Val Ala Glu Leu Leu Leu His Gly Ala Glu Pro Asn Cys Ala Asp Pro Ala Asn Val His Val Ala Ala Leu Leu Leu Asn Tyr Gly Ala Asp Ser Asn Cys Glu Asp Pro Ile Gln Val Met Met Met Gly
Ile Gln Val Met Met Gly
Met Met Met Gly p16: p15: p13:

Arg Arg Arg Arg Arg Ala Ala មិន្តិ l Val Leu His Arg Ala G l Val Leu His Arg Ala G l Val Leu His Gly Ser G Leu Val Leu Val Leu Val Pro Val His Asp Ala Ala Arg Glu Gly Phe Leu Asp Pro Val His Asp Ala Ala Arg Glu Gly Phe Leu Asp Pro Val His Asp Ala Ala Arg Glu Gly Phe Leu Asp Arg Arg Thr Thr Ser Thr Phe Thr Leu Thr Leu Thr Thr 1

Tyr Leu Tyr Leu I Leu Asp Val Arg Asp Ala Trp Gly Arg Leu Pro Val Asp Leu Ala Glu Glu Leu Gly His Arg Asp Val Ala Arg Leu Asp Val Arg Asp Ala Trp Gly Arg Leu Pro Val Asp Leu Ala Glu Glu Arg Gly His Arg Asp Val Ala Gly Leu Asp Val Arg Asp Ala Trp Gly Arg Leu Pro Leu Asp Leu Ala Glu Glu Arg Gly His Gln Asp Ile Val Arg

Thr Ala Ala Ala Gly Gly Thr Ala Thr Gly Asp Ser Ala * Gly Cys S GLy

Cys Ser

9 Eig.